CLAIMS

1. An aircraft navigation aid method, characterized in that it comprises the following steps consisting in:
   a) defining an area to be sensed to the right and to the left of a first hypothetical path of the aircraft, designated the feeler line support path,
   b) sensing, for each of the two areas to be sensed to the right and to the left, a corresponding predefined underlying relief, in order to identify dangerous sub-zones to the right and/or to the left,
   c) computing, for each of the dangerous sub-zones to the right and/or to the left, a time ΔT remaining to begin an avoidance maneuver before a point of no return, and determining for the dangerous sub-zones to the right a minimum ΔT denoted ΔT right and/or for the dangerous sub-zones to the left a minimum ΔT denoted ΔT left,
   d) establishing a navigation aid from ΔT right and/or ΔT left.

2. The method as claimed in the preceding claim, characterized in that the feeler line support path is determined during a time T broken down into a pilot reaction time T_{reac}, a time T_{pull} for placing the aircraft on a horizontal path and a time T_{roll} for placing the aircraft in a roll.

3. The method as claimed in any one of the preceding claims, characterized in that an area to be sensed to the right and/or to the left is defined according to rings succeeding one another, each ring presenting a diameter D in the form D = d + safety margin, d being the diameter of a circular avoidance maneuver.

4. The method as claimed in any one of the preceding claims, characterized in that the areas to be sensed are defined according to the current straight-line or turning path of the aircraft.

5. The method as claimed in any of the preceding claims, characterized in that it comprises a step prior to step b) consisting in parameterizing the areas so that the relief underlying these areas can be sensed.

6. The method as claimed in the preceding claim, characterized in that the areas and the relief are parameterized according to a grid reference.

7. The method as claimed in any one of the preceding claims, characterized in that the dangerous sub-zones of step b) are identified according to a second hypothetical path of the aircraft such that:
if the aircraft is ascending, the ascent is stopped immediately,
in other cases, the path is continued unchanged.

8. The method as claimed in any one of the preceding claims, characterized in that the time ΔT of step c) is computed according to a hypothetical flight time toward a dangerous sub-zone, calculated according to a time T_{pull} to place the aircraft in a horizontal path and a time T_{roll} to place the aircraft in a roll:
in a horizontal plane when the aircraft is ascending or flying level,
in a horizontal plane and in a vertical plane when the aircraft is descending.

9. The method as claimed in any one of the preceding claims, characterized in that step d) comprises a step for comparing ΔT right and/or ΔT left with

one or more predefined times.

10. The method as claimed in any one of the preceding claims, characterized in that step d) comprises a step consisting in determining the time remaining for the safest side (best lateral) (safer) from the maximum between ΔT right and/or ΔT left and the time remaining for the least safe side (worst lateral) (less) from the minimum between ΔT right and/or ΔT left.

11. The method as claimed in any one of the preceding claims, characterized in that it comprises a step consisting in generating a lateral avoidance maneuver.

12. An aircraft navigation aid device (1), comprising a mass memory (2) designed to store a terrain database, a program memory (3) comprising an application program of the method as claimed in any one of the preceding claims, a central processing unit (4) designed to run the program and an input-output interface (5).